REMARKS

In the Official Action dated March 25, 2004, the Examiner objected to the Abstract, alleging that general nature of the compounds and its use should be given. The Examiner objected to the disclosure alleging that the parent should be updated on page 1 of the specification. The Examiner rejected Claims 15-22 under 35 U.S.C. §112, second paragraph, alleging that these claims are indefinite. The Examiner rejected claims 1-4, and 12-32 under 35 U.S.C. §112, first paragraph alleging that these claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make/use the invention.

This response addresses each of the Examiner's objections and rejections. Accordingly, the present application is in condition for allowance. Favorable consideration of all pending claims is therefore respectfully requested.

Applicants have amended claim 1 and cancelled claims 2 and 5-10 without prejudice as being drawn to a non-elected invention. Applicants reserve the right to file continuing applications directed toward the cancelled claims and deleted subject matter.

The Examiner objected to the Abstract, alleging that general nature of the compounds and its use should be given. For purposes of expediting prosecution, the Applicants have amended the Abstract to include that general nature of the compounds and its use. Accordingly, Applicants request reconsideration and withdrawal of this rejection.

The Examiner objected to the disclosure alleging that the parent should be updated on page 1 of the specification. In response, Applicants have amended the Cross Reference to Prior Applications before the Background of the Invention to include that USSN 09/973,615 filed October 9, 2001 is now abandoned.

The Examiner rejected Claims 15-22 under 35 U.S.C. §112, second paragraph, alleging that these claims are indefinite because claims 15, 17, 19 and 21 are duplicate composition claims. Applicants respectfully disagree.

Claims 15 and 17 both recite compositions for treating specific disorders. However the amounts of active ingredients may well be different. Specifically, the amount of active ingredient in claim 15 is an amount of a compound according to claim 1, or a pharmaceutically acceptable salt thereof, that is effective in treating such disorder or condition recited in claim 15, and a pharmaceutically acceptable carrier. In contrast, the amount of active ingredient in claim 17 is a dopamine D3 receptor binding modulating amount of a compound according to claim 1. The amount of active ingredient in the composition in claim 15 may very well be different from the amount of active ingredient in the composition in claim 17.

Claims 19 and 21 recite methods for treating a disorder or condition, treatment of which can be effected or facilitated by modulating binding activity at the dopamine D3 receptor. However, the amounts of active ingredients may well be different. Specifically, the amount of active ingredient in claim 19 is an amount of a compound according to claim 1, or a pharmaceutically acceptable salt thereof, that is effective in treating such disorder or condition. In contrast, the amount of active ingredient in claim 21 is a dopamine D3 receptor binding modulating amount of a compound according to claim 1. The amount of active ingredient in the composition in claim 19 may very well be different from the amount of active ingredient in the composition in claim 21.

Furthermore, claims 15 and 17 each differ from claims 19 and 21, because the amount of active compound required to modulate binding activity at the dopamine D3 receptor in claims 19 and 21 can be different from the amount of active compound needed to treat the

specific diseases of claims 15 and 17.

Accordingly, claims 15, 17, 19 and 21 are not substantial duplicates. Applicants respectfully request reconsideration and withdrawal of this rejection under 35 U.S.C. §112, second paragraph.

The Examiner rejected claims 20 and 22 under 35 U.S.C. §112, second paragraph, alleging that these claims are indeterminate in scope because no specific disorder is recited and that the term "modulating" does not denote a causative factor by which a particular disease may occur. Applicants respectfully disagree.

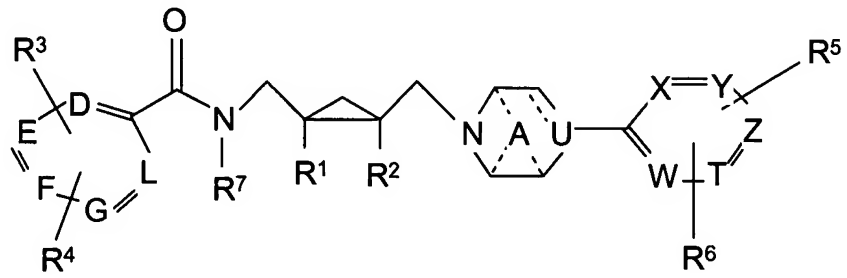
Page 23 of the specification discloses that methods of treating conditions which require modulation of dopamine D3 receptors include anxiety, sexual dysfunction, movement disorders, history of substance abuse or psychosis. In addition, methods of testing functional activity of compounds at D3 receptors are disclosed on pages 25-26 of the specification. Accordingly, one skilled in the art would readily identify which diseases require modulation of dopamine D3 receptors and how to test for functional activity of compounds at D3 receptors. Applicants respectfully request reconsideration and withdrawal of this rejection.

The Examiner rejected claims 1-4, and 12-32 under 35 U.S.C. §112, first paragraph, alleging that these claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make/use the invention. The Examiner alleges that the specific examples only disclose that rings D-E-F and X-Y-Z can be pyrimidinyl or phenyl rings, and that the scope of R^9-R^{19} have not been tested. Applicants respectfully traverse.

For purposes of expediting prosecution, Applicants have amended the specification by adding the proviso that ring D, E, F, G, L and ring T, W, X, Y and Z are each

independently pyrimidinyl or phenyl rings

Based on this amendment, the compounds of the claimed invention have the following same unique structural pattern containing pyrimidinyl or phenyl rings at each end of the molecule:



The compounds of the claimed invention were tested by the Applicants and have been found to be active as modulators of D3 receptor as disclosed on pages 25-26 of the specification.

The unique acylamino cyclopropane structure of the compounds of the claimed invention is responsible for the pharmacological activity of the compounds of the claimed invention. The unique structural pattern of a drug molecule, which is responsible for the action of the compound is known as a pharmacophore. One ordinarily skilled in the art would understand that many compounds having the same pharmacophore often possess similar biological activity. In fact, the major goal of drug discovery is to understand the structure-activity relationship and identify the pharmacophore. It is well-known in the pharmaceutical and biomedical research field that a drug can exert inhibitory or stimulatory activity because a specific site of an enzyme can recognize the unique structural pattern of the drug molecule and consequently interact with the molecule.

In the present case, Applicants have synthesized and tested compounds of the claimed invention, and consequently discovered the essential structure-activity relationship and

pharmacophore for the protein kinase inhibitors of the present invention. (See pages 58-60 of the PCT application.) The number of compounds that fall within the scope claims 1-4, and 12-32 does not bear any importance to the claimed invention. Accordingly, there is ample support in the specification that shows that the compounds of the claimed invention are active as protein kinase inhibitors, and thus, possess the claimed activity.

In regard to substituents R^9-R^{19}, Applicants point out that one is merely changing substituents and continuing to conduct reactions with similarly structured molecules with differences in the desired substituents. Such chemistry research is standard practice for one skilled in the art, a medicinal chemist. Applicants should not be required to provide a voluminous production specification document for practices in the field of chemistry, which are not well known, but standard for many practitioners.

Applicants respectfully note that the level of skill in the pharmaceutical medicinal chemistry field is very high and has been developed for almost 50 years. It is reasonable to expect that those of ordinary skill in the art based upon their knowledge and applicants' disclosure will be able to practice the full scope of the claimed invention. Applicants should not be required to unduly limit the scope of their invention, if that is the case, then the value of applicants' invention is seriously diminished. Applicants are entitled to a reasonable level of protection based upon their teachings and disclosure.

The Examiner has also alleged that the scope of the uses of claims 15-22, 24, 25 and 27-32 are not enabled by what is currently known in the art for dopamine D3 receptors. Applicants respectfully traverse.

The dopamine D3 receptor were cloned by Sokoloff et al. (Nature, 347, 146 (1990)). This receptor shows a relatively high abundance in brain regions associated with

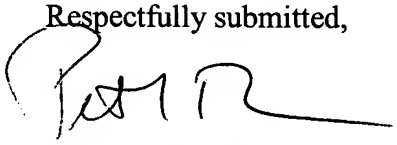
emotional and cognitive functions.

Moreover, U.S. Patent Nos. 5,708,018 and 6,084,130 each disclose that D3 receptor ligands may be useful in treating CNS disorders, e.g. schizophrenia, mania, depression, geriatric disorders, drug abuse and addiction, Parkinson's disease, anxiety disorders, sleep disorders, circadian rhythm disorders and dementia. Moreover, each of these patents have issued claims relating to the treatment of CNS disorders by administering compounds associated with D3 receptor activity. Copies of the `018 and `130 patents are enclosed herein as Exhibit A for the Examiner's convenience.

Accordingly, Applicants respectfully request reconsideration and removal of the rejections of claims 1-4, and 12-32 under 35 U.S.C. §112, first paragraph.

Thus, in view of the foregoing amendments and remarks, the application is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



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